

What is claimed is:

1. A composition comprising a plurality of polynucleotides having the nucleic acid sequences of SEQ ID NOs:1-48 or the complements thereof.

5 2. An isolated polynucleotide comprising a nucleic acid sequence selected from SEQ ID NOs:1-48 and the complements thereof.

3. A composition comprising a polynucleotide of claim 2 and a labeling moiety.

4. A method of using a polynucleotide to screen a plurality of molecules to identify at least one ligand which specifically binds the polynucleotide, the method comprising:

10 a) combining the composition of claim 1 with a plurality of molecules under conditions to allow specific binding; and

b) detecting specific binding, thereby identifying a ligand which specifically binds a polynucleotide.

5. The method of claim 4 wherein the composition is attached to a substrate.

15 6. The method of claim 4 wherein the molecules to be screened are selected from DNA molecules, RNA molecules, peptide nucleic acids, mimetics, and proteins.

7. A method of using a polynucleotide to purify a ligand, the method comprising:

20 a) combining the polynucleotide of claim 2 with a sample under conditions to allow specific binding;

b) recovering the bound polynucleotide; and

c) separating the ligand from the bound polynucleotide, thereby obtaining purified ligand.

8. The method of claim 7 wherein the polynucleotide is attached to a substrate.

9. A method for using a polynucleotide to detect gene expression in a sample, the method comprising:

25 a) hybridizing the composition of claim 1 to a sample thereby forming at least one hybridization complex;

b) detecting complex formation, wherein complex formation indicates gene expression in the sample.

10. The method of claim 9 wherein the polynucleotides of the composition are attached to a substrate.

11. The method of claim 9 wherein the sample is from pancreatic tissue.

30 12. The method of claim 9 wherein gene expression is compared to standards and indicates the presence of type I diabetes.

13. A vector comprising a polynucleotide of claim 2.

14. A host cell comprising the vector of claim 13.

15. A method for using a host cell to produce a protein, the method comprising:

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- a) culturing the host cell of claim 14 under conditions for expression of the protein; and
- b) recovering the protein from cell culture.

16. A purified protein or a portion thereof comprising an amino acid sequence selected from SEQ ID NO:49-62.

17. A composition comprising the protein of claim 16 and a pharmaceutical carrier or a labeling moiety.

18. A method for using a protein to screen a plurality of molecules to identify at least one ligand which specifically binds the protein, the method comprising:

a) combining the protein of claim 16 with the plurality of molecules under conditions to allow specific binding; and

b) detecting specific binding between the protein and ligand, thereby identifying a ligand which specifically binds the polypeptide.

19. The method of claim 18 wherein the plurality of molecules is selected from DNA molecules, RNA molecules, peptide nucleic acids, mimetics, proteins, agonists, antagonists, and antibodies.

20. A method of using a protein to prepare and purify antibodies comprising:

a) immunizing a animal with the protein of claim 16 under conditions to elicit an antibody response;

b) isolating animal antibodies;

c) attaching the protein to a substrate;

d) contacting the substrate with isolated antibodies under conditions to allow specific binding to the protein;

e) dissociating the antibodies from the protein, thereby obtaining purified antibodies.